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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,412	09/20/2000	Tetsuji Shono	P19597	7432

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EXAMINER
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SELBY, GEVELL V

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/665,412

Applicant(s)

SHONO, TETSUJI

Examiner

Gevell Selby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004 and 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 11 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,9,10 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 5,6 and 16-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on 12/21/04 and 2/7/05 have been entered.

### *Response to Arguments*

2. Applicant's arguments filed 12/21/04 have been fully considered but they are not persuasive. The applicant submits the prior art does not disclose the limitation of comprising a tilting/swinging mechanism, provided in the camera body, that enables concurrent compound movement of the image pick-up element, relative to the optical axis, in at least two orthogonal planes such that the sensitive surface rotates about the intersection point as claimed in claims 1 and 7. The Examiner respectfully disagrees.

#### Examiner's Response:

In regard to claims 1 and 7, the Mutze reference discloses a tilting/swinging mechanism (see figure 1, element 6: the sensor mount 6 swings about axis  $a_x$  or  $a_y$ ), provided in the camera body, that enables concurrent compound movement of the image pick-up element (see figure 2, element 14 and column 3, lines 38-59: It is inherent that when the actuating element for the adjusting screw to tilt the image sensor about the  $A_x$  axis and the actuating element for the adjusting screw to swing the image sensor about the  $A_y$  axis are actuated at the same time, the

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image sensor with rotate and swing about the two axis at the same time, enabling concurrent compound movement and thereby allowing the sensor to be moved to the a desired location quickly), relative to the optical axis, in at least two orthogonal planes such that the sensitive surface rotates about the intersection point (see column 2, lines 56-63).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1, 3, 4, 7, 9, 10, and 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Mutze, US 6,072,529.**

In regard to claim 1, Mutze, US 6,072,529, discloses a digital camera comprising:

a photographic lens (see figure 1, element 4) that is provided on a camera body of said the digital camera, the photographic lens defining an optical axis of said photographic lens that is stationary with respect to said the camera body (see column 2, lines 42-48);

an image pick-up element (see figure 1, element 2) on which an image formed by the photographic lens images, the image pick-up element comprising a sensitive surface that intersects the optical axis at an intersection point (see column 2, lines 58-55);

a tilting/swinging mechanism (see figure 1, element 6: the sensor mount 6 swings about axis  $a_x$  or  $a_y$ ), provided in the camera body, that enables concurrent compound movement of the image pick-up element (see figure 2, element 14 and column 3, lines 38-59: It is inherent that when the actuating element for the adjusting screw to tilt the image sensor about the  $A_x$  axis and the actuating element for the adjusting screw to swing the image sensor about the  $A_y$  axis are actuated at the same time, the image sensor will rotate and swing about the two axis at the same time, enabling concurrent compound movement and thereby allowing the sensor to be moved to the a desired location quickly), relative to the optical axis, in at least two orthogonal planes such that the sensitive surface rotates about the intersection point (see column 2, lines 56-63).

In regard to claim 3, Mutze, US 6,072,529, discloses the digital camera according to claim 1, the tilting/swinging mechanism comprising:

a mount (see figure 1, element 6) to which the image pick-up element is fixed, the mount comprising a convex surface (The convex surfaces are the cylinders extending from the mount that connect to the base); and

a base, fixed to the camera body, comprising a concave surface having a radius of curvature corresponding to a radius of curvature of said the convex surface (see figure 1: The base has concave receiving holes to connect to the mount and is fixed to the camera body that holds the lens),

wherein the mount is mounted on the base such that the convex surface is slidable on the concave surface (The convex cylinders slide in the concave holes in the base to rotate the sensor).

In regard to claim 4, Mutze, US 6,072,529, discloses the digital camera according to claim 3, the tilting/swinging mechanism further comprising an operation member fixed to the mount, enabling movement of the mount relative to the base (see figure 1, The concave cylinders extending from the mount are the operation members enabling movement.)

In regard to claim 7, Mutze, US 6,072,529, discloses a digital camera having a photographic lens (see figure 1, element 4) and an image pick-up element (see figure 1, element 2), the photographic lens being attached to a camera body of the digital camera such that an optical axis of the photographic lens is stationary with respect to the camera body, an image of an object to be photographed impinging on the image pick-up element through the photographic lens (see column 2, lines 43-55), the digital camera comprising:

a tilting/swinging mechanism (see figure 1, element 6), provided in the camera body, configured to at least one of tilt and swing a sensitive surface of said image pick-up element by concurrent compound movement (see figure 2, element 14 and column 3, lines 38-59: It is inherent that when the actuating element for the adjusting screw to tilt the image sensor about the  $A_x$  axis and the actuating element for the adjusting screw to swing the image sensor about the  $A_y$  axis are actuated at the same time, the image sensor with rotate and swing about the two axis at the same time, enabling concurrent compound movement and

thereby allowing the sensor to be moved to the a desired location quickly), in at least two orthogonal planes, relative to the optical axis, wherein said the tilting/swinging mechanism comprises (see column 2, lines 56-61):

a movable member to which the image pick-up element is fixed (see figure 1, element 6); and

a stationary member to which the movable member is rotatably connected to enable the movable member to move relative to the stationary member to enable at least one of tilting and swinging the sensitive surface relative to one a point at which the sensitive surface intersects the optical axis (The base that attaches to the mount (6) is stationary in the camera body, when rotating about the  $a_x$  or the  $a_y$  axis).

In regard to claim 9, Mutze, US 6,072,529, discloses the digital camera according to claim 1, wherein the intersection point is stationary with respect to the camera body (see figure 1: The lens is stationary, making the intersection between the optical axis and the center point of the image sensor, on which it rotates, also stationary).

In regard to claim 10, Mutze, US 6,072,529, discloses the digital camera according to claim 7, wherein the point at which the sensitive surface intersects the optical axis remains stationary with respect to the camera body (see figure 1: The lens is stationary, making the intersection between the optical axis and the center point of the image sensor, on which it rotates, also stationary).

In regard to claims 12 and 13, Mutze, US 6,072,529, discloses the digital camera according to claims 1 and 7, respectively, wherein the concurrent enabled by the

tilting/swinging compound movement of the image pick-up element mechanism comprises spherical movement (see figure 1, elements  $a_x$  and  $a_y$ : It is inherent that actuating the actuators to rotate the image sensor about the  $a_x$  and  $a_y$  axis provides for a spherical movement).

In regard to claims 14 and 15, Mutze, US 6,072,529, discloses the digital camera according to claims 1 and 7, respectively, wherein the concurrent compound movement of the image pick-up element enabled by the tilting/swinging mechanism comprises skewing movement relative to two orthogonal planes (see figure 1, elements  $a_x$  and  $a_y$ : It is inherent that actuating the actuators at different speeds to rotate the image sensor about the  $a_x$  and  $a_y$  axis provides for a skewing movement).

#### *Allowable Subject Matter*

5. Claims 5, 6, and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regard to claim 5, Mutze, US 6,072,529, discloses the digital camera according to claim 1, the tilting/swinging mechanism comprising:

- a mount to which the image pick-up element is fixed; and
- a base fixed to the camera body.

The prior art does not disclose the mount comprising a convex spherical surface which defines a portion of a sphere having a center point coincident with the intersection point between the optical axis and the sensitive surface of the image pick-up element; and



a base, fixed to the camera body, comprising a concave spherical surface having a radius of curvature corresponding to a radius of curvature of the convex surface, the mount being mounted on the base such that the convex spherical surface is slidable on the concave spherical surface;

wherein a sliding movement of the convex spherical surface on the concave spherical surface causes the sensitive surface of the image pick-up element to rotate about the intersection point.

In regard to claim 6, the prior art does not disclose the digital camera according to claim 5, further comprising an operation member fixed to the mount, that enables movement of the mount relative to the base.

In regard to claims 16 and 17, the prior art does not disclose the digital camera according to claims 1 and 7, respectively, wherein said tilting/swinging mechanism is configured to enable the concurrent compound movement of the image pick-up device by a single operation member.

In regard to claims 18 and 19, the prior art does not disclose the digital camera according to claims 1 and 7, respectively, said tilting/swinging mechanism comprising a convex spherical surface and a concave spherical surface mounted for relative slidable motion therebetween.

6. Claims 8 and 11 are allowed.

In regard to claim 8, the prior art does not disclose the limitations of:

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a rotatable mount having the image pick-up element attached to one side and defining a convex spherical surface on an opposite side, a radius of the convex spherical surface being centered on the intersection point; and

a base, fixed to the camera body, defining a concave spherical surface that slidably cooperates with the convex spherical surface of the rotatable mount;

wherein movement of the rotatable mount with respect to the base rotates the sensitive surface around the intersection point.

In regard to claim 11, the prior art does not disclose the digital camera according to claim 8, wherein the intersection point is stationary with respect to the camera body.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on 571-272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

  
TUAN HO  
PRIMARY EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



TUAN HO  
PRIMARY EXAMINER